

Consumer Decision-Making and the Consumption of Information

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by

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### Abstract

Herbert Simon (1955, 1956, 1957) suggested that, due to cognitive limitations and the ever-growing complexity of the human environment, some people develop a decision-making method called “satisficing” that simplifies choice situations. Schwartz et al. (2002) explained that satisficers seek that which is simply “good enough,” so any extraneous options are not relevant once the satisficer’s needs have been met. Maximizers, on the other hand, feel compelled to always make the best possible decision and are driven to meticulously evaluate each alternative in order to ensure that the optimal choice is made. While satisficers are comfortable making decisions based partly on internal information and what “feels” right to them, maximizers necessitate abundant, concrete facts to make the optimal choice (Schwartz, 2004). This experiment explored the differences in how maximizers and satisficers use, interpret, and remember consumer information. In addition, using Nygren’s Decision-Making Style Inventory (DMI), I analyzed the relationship between analytical/intuitive/regret-based decision-making styles (Nygren, 2000), and maximizing/satisficing decision-making styles. One hundred and seventy introductory psychology students completed Schwartz’s Maximization Scale, Regret Scale (Schwartz, 2002), DMI, and Generalized Self Efficacy Scale (Bosscher and Smit, 1998). Then, using an interactive computer program that measured information consumption, participants viewed fictional advertisements for ordinary consumer products. Information was provided concerning product characteristics like usability, materials, aesthetics, and technical specifications. The program recorded how much information participants viewed and the duration of time spent viewing the information. Participants also answered questions regarding what information they remembered, the confidence level regarding their product decisions, the likelihood of post-decision regret, and various other decision-making details. Results indicated that the maximization and analytical decision-making styles were significantly correlated. Maximizing was significantly correlated with the expressed need for gathering information and effort expended in evaluating products. The analytical style was correlated with the time participants viewed information, the number of items viewed, the expressed need for gathering information, the effort expended in evaluating products, and the amount of information remembered. These findings suggest that for this type of decision situation, the DMI was a more effective measurement tool than the Maximization Scale. Also, analytical decision-makers evaluated product information and made decisions using a significantly more complex, exacting approach. The findings of this experiment contribute to the understanding of how decision-making styles affect information consumption. These results have implications for advertising, consumer behavior, and future judgment and decision-making research.

### **Consumer Decision-Making and the Consumption of Information**

Today's consumers are faced with a seemingly endless array of choices. It is staggering to consider the variety of options for products like cars, movies, cookies, televisions, and shoes. Because America was founded on the ideals of freedom and autonomy, more choices naturally seem like more opportunity, and ultimately, more happiness (Schwartz, 2004). However, for some decision-makers in particular, there is a downside to the barrage of choices.

Information processing is subject to *bounded rationality* (Simon, 1955), the idea that decision makers are not capable of making entirely rational, logical decisions. Instead, many information processing limitations exist that impair a decision maker's ability to compute, judge, understand, and remember information. For example, a person who is house-hunting cannot possibly possess the cognitive capacity to process and compare infinite factors like price, location, design, quality and size. Instead, that person's opinion of a particular house may become positively swayed after meeting a friendly neighbor living next door, even though basing a decision on such information would defy rationality. Simon (1955, 1956, 1957) suggested that, due to cognitive limitations and the ever-growing complexity of the human environment, some develop a decision-making method that simplifies choice situations. Simon introduced the idea that some people have the goal of *satisficing*, or simply choosing what meets a certain acceptability threshold. Satisficing is a much more realistic decision-making strategy than *maximizing*, which is the pursuit of the "best" possible option.

Schwartz (2000) explained that one must gain adequate information about each possibility before making a choice. Therefore, as choice options become more numerous, the task of gathering information becomes increasingly daunting. Schwartz et al. (2002) argued that

increased choices affect people differently depending on their decision-making styles. He explained that some of us use a satisficing style, and some use a maximizing style.

Schwartz et al. (2002) argued that satisficers seek something that is “good enough.” A satisficer would not feel the need to read descriptions of dozens of sandwiches listed on a deli’s menu. As soon as one sandwich sounded like it would hit the spot, a satisficer would confidently order it. Additional options are no longer relevant because the satisficer’s needs have been met, so the satisficer feels satisfied.

People who feel the need to always make the best possible decisions, maximizers, become more and more distressed with each added option. Maximizers are driven to carefully evaluate each alternative in order to ensure that the best possible choice is made. Then, after making a choice, they often experience doubt and regret. Clearly, compared to his or her satisficer counterpart, a maximizer would have a much more difficult time ordering lunch at the deli. In their quest to choose the elusive best outcome, maximizers take great care and effort when weighing the pros and cons of all alternatives (Schwartz et al., 2002).

The need to choose the best option causes the maximizer’s decision-making process to become exceedingly complex because always choosing the “best” is unachievable. Decision-making strategies must be applied to all domains of life, and most decisions are complex. Consumer decisions and life decisions are multifaceted and do not have a singular option that clearly trumps all of the others. It can be quite challenging to make a decision that requires the comparison of multiple computers, job offers, or potential spouses. Because the notion of an ideal, best choice is purely abstract, maximizers are driven to use social comparison information to gauge the success of their decisions. It is impossible to establish that one person’s decision is better than the decisions of others unless all the decisions are methodically compared. Therefore,

maximizers often rely on social comparison information and other forms of concrete data in order to assess the hopefully superior quality of their decisions (Schwartz, 2004).

Payne, Bettman, and Johnson (1993) suggested that information, because it has a price (in money or time), is technically a “good” that is consumed like any other commodity. However, the amount of information consumed before making a decision largely depends on the decision-making strategy employed. The satisficer at the aforementioned deli chose a sandwich based on his or her internal needs and desires. Perhaps the satisficer had been craving salami, so as soon as a sandwich was found that met that requirement, he or she would likely choose it.

Conversely, a maximizer at the same deli might be likely to painstakingly read each ingredient in each sandwich on the menu, weigh the pros and cons of each item, look around at the other diners to find out what they have ordered, refer back to the restaurant review that appeared in the morning newspaper, and perhaps even question whether the sushi restaurant might have been a better choice than the deli in the first place. Maximizers insatiably search for external, explicit, fact-based information to aid their decision-making. While satisficers are comfortable making decisions based partly on internal information and what “feels” right to them, maximizers necessitate abundant, concrete information to make the optimal choice (Schwartz, 2004).

Past research has established that these two different decision-making styles often yield different outcomes. Schwartz (2004) showed that maximizers generally make objectively better decisions than satisficers due to their more thorough approach, but maximizers are notoriously less satisfied with the decisions they make. In fact, Iyengar, Wells, and Schwartz (2006) showed that maximizing college graduates landed jobs with 20% higher starting salaries than satisficing students, but despite their superior outcomes, the maximizers reported lower job satisfaction and experienced more negative affect during the process of job hunting.

Although past research has examined the two decision-making styles in relation to factors like objective outcomes, ease of decision-making, negative affect, regret, and depression (Schwartz, 2004), no prior research has specifically compared the two groups in relation to the use of consumer information and other types of decision-making styles. This new knowledge could further the understanding of various decision-making styles and also have important implications for the fields of advertising and consumer behavior.

The initial phase of my study will compare Nygren's Decision-Making Style Inventory (abbreviated as the "DMI") (Nygren, 2000) to Schwartz's Maximization Scale (Schwartz et al., 2002). The DMI measures the degree to which an individual makes decisions in an analytical, intuitive, or regret-based style. An individual with an analytical decision-making style would prefer to weigh all relevant information before coming to a decision. An individual with an intuitive decision-making style would prefer to make decisions based on instinct. Lastly, an individual with a regret-based style would commonly feel regretful about his or her decisions, and would be highly motivated to avoid that regret. Because these decision-making styles could have parallels to maximizing and satisficing, I will analyze whether a relationship exists between maximizing/analytical/regret decision-making styles and satisficing/intuitive decision-making styles (Nygren, 2000). I hypothesize that statistical analyses of the DMI and Maximization Scale will show these relationships. I expect these results due to the similarities in decision-making approaches and regret tendencies, which have been established in past research (Nygren, 2000; Schwartz et al., 2002).

Besides this novel comparison of decision-making styles, this study will examine the differences between how maximizers and satisficers use, interpret, and remember consumer information. Participants will analyze consumer information about four products presented in

either a satisficer or maximizer style. Then, the amount of time each participant views each ad and the amount of product details viewed by each participant will be measured. I will also assess decision-making and information consumption by asking questions regarding confidence levels, effort, need for gathering information, and how much information was used and remembered.

Compared to satisficers and intuitive decision-makers, I hypothesize that maximizers and analytical decision-makers will spend more time viewing the ads, that they will view more information, and that they will prefer ads with information based on facts, rankings, and social comparison data. I also hypothesize that maximizers and analytical decision-makers will put more effort into the task because they will feel a stronger need to assess the product information. Finally, I predict that maximizers and analytical decision-makers will correctly remember the most information after reading the product details because of their heightened effort and motivation. This study will provide a greater understanding of decision-making styles in general, and will also explore how decision-making styles affect the use of information.

### Method

#### *Participants*

One hundred and ninety seven undergraduate Introductory Psychology students individually completed the experiment in a computer lab. However, data were used from only one hundred and seventy participants due to twenty seven individuals not completing enough of the experiment to glean usable data. One hundred and sixteen participants were male, and fifty four participants were female. The reason for the gender disparity is unknown, as males were not specially targeted or given any preference during the experiment sign-up process.

### *Materials and Apparatus*

All participants first completed four questionnaires: the Maximization Scale (Schwartz et al., 2002), Schwartz's Regret Scale (Schwartz et al., 2002), the DMI (Nygren, 2000), and the Generalized Self Efficacy Scale (Bosscher and Smit, 1998). The Maximization Scale and DMI assess decision-making styles, the Regret Scale measures the tendency to regret one's decisions, and the Generalized Self Efficacy Scale measures the belief that one's actions and abilities can produce successful outcomes. Self efficacy relates to confidence in decision-making.

Following the questionnaires, participants began the product assessment task. Employing an interactive computer program designed to assess information consumption, all participants were asked to make choices about four fictional advertisements for ordinary consumer products.

The computer program was conceptually derived from the Mouse Lab Task (Payne et al., 1993), a program designed to measure details of information processing. The program utilized in this study measured the duration of time each participant viewed each piece of product information. Also, the program recorded exactly which items of information were viewed and how many times the participants referred back to those items. The interactive nature of the program allowed participants to view as much or as little information as they desired. Participants were shown a picture of each product individually, and then could choose to click on various icons in order to view specific details about the given product. Therefore, by measuring the "clicks" each participant made, the amount of information viewed and time it was viewed was measured.

### *Procedure*

The entirety of the experiment was completed on computers. Participants first completed the series of questionnaires. They were then told that they would be evaluating some products



and would have the opportunity to gather more information about each one, although this was not required. They were instructed to view as much information as they desired in order to assess the products. Participants were told to view the consumer products as if they would potentially be purchasing them.

The four hypothetical products used were a digital camera, sunglasses, a backpack, and a portable DVD player. No pricing information was provided, but participants were told to assume that all products were priced competitively and to not take cost into consideration. These products were chosen because they are all unisex and could reasonably appeal to almost any college student. Each participant was shown two products presented with satisficing information and two products presented with maximizing information, and they were counterbalanced across participants to account for possible order effects. All participants were randomly assigned to conditions. The two satisficing products had information based on gut feelings and internal, subjective facts and the two maximizing products had information based on concrete data and external, objective facts. For each product, maximizing-style or satisficing-style, information was available regarding technical specifications, materials, miscellaneous specifics, aesthetics, and usability. The two alternate versions of each product's information, tailored for either a maximizer or a satisficer, were written in completely parallel forms.

For example, participants were shown an ad for sunglasses that had either maximizing or satisficing style information addressing the product's features, specifications, and comparisons to other similar brands. The program documented the participants' actions and times as the information was explored. Following the information-gathering phase, participants completed a brief questionnaire regarding what information they used and remembered from the ad, how confident they would feel making a purchasing decision based on this information, how much

effort they put into researching the information, and how important it was for them to view the information provided. Then, the participants were shown an ad for a digital camera with either maximizing-style or satisficing-style information and subsequently answered the same series of post-ad questions. Each participant saw a total of four products, half in one style and half in the other. Participants generally completed the experiment in twenty five to thirty minutes. All participants received a written debriefing upon completion.

## Results

### *Correlations for Individual Differences Measures*

Correlational analyses were conducted. Table 1 presents the Pearson's correlations between all individual differences measures used in the experiment. Concerning the disproportionate amount of males to females (116 males and 54 females) in the total sample ( $n = 170$ ), there was only one moderately statistically significant difference among all of the measures for gender. The statistical significance of scores for females on the DMI–Regret scale was somewhat higher than for males ( $r = .155$ ,  $p < .05$ ). However, there were no other statistically significant differences in relation to the scales, so the gender disparity did not confound the results.

As expected, Schwartz's 13-item Maximization Scale and 5-item Regret Scale (Schwartz et al., 2002) were significantly correlated, with a tendency for maximizers to experience more regret ( $r = .272$ ,  $p < .01$ ). Being a maximizer was not significantly correlated with the 17-item Generalized Self Efficacy Scale ( $r = .089$ ). Concerning the 45-item DMI, maximizing was significantly positively correlated with the DMI-Analytical subscale ( $r = .310$ ,  $p < .01$ ) and the DMI–Regret subscale ( $r = .178$ ,  $p < .05$ ). However, maximizing was not significantly correlated with the DMI–Intuitive subscale ( $r = .141$ ).

In order to more effectively compare the DMI and Maximization Scale, the experimenter created three subscales for the Maximization Scale so that it would emulate the three-subscale format of the DMI. A factor analysis of the Maximization Scale (Schwartz et al., 2002) showed that the items load in three distinctly separate ways. Six of the items (max-info seeking subscale) are concerned with information seeking, four of the items (max-lack of closure subscale) assess a lack of closure regarding one's decisions, and three of the items (max-self efficacy subscale) are concerned with self efficacy and confidence. Items of subscale 1 (max-info seeking) all relate to never being satisfied with the decisions one has already made, and to always seek the next best thing. Items of subscale 2 (max-lack of closure) are all related to shopping or doing tasks where it is difficult to come to a final decision and achieve a sense of closure that the best decision has been made. Finally, items of subscale 3 (max-self efficacy) all relate to self-efficacy in one's decisions, and confidence that one should strive to make optimal decisions.

The max-info seeking subscale was significantly correlated with the DMI-Analytical subscale ( $r = .240, p < .01$ ) and the DMI-Intuitive subscale ( $r = .262, p < .01$ ). This was expected, as the DMI-Analytical and DMI-Intuitive subscales were significantly correlated with one another ( $r = .319, p < .01$ ). The max-lack of closure subscale was significantly correlated with both scales measuring the tendency to experience regret. The max-lack of closure subscale was significantly correlated with the DMI-Regret subscale ( $r = .243, p < .01$ ) and Schwartz's Regret Scale ( $p = .336, p < .01$ ). Also, the max-lack of closure subscale had a significant negative correlation with the Generalized Self Efficacy Scale ( $r = -.271, p < .01$ ). Lastly, the max-self-efficacy subscale was significantly correlated with the DMI-Analytical subscale ( $r =$

.470,  $p < .01$ ), the DMI-Intuitive subscale ( $r = .245$ ,  $p < .01$ ), and the Generalized Self Efficacy Scale ( $r = .556$ ,  $p < .01$ ).

Schwartz designed the Maximization Scale to be summed, adding up all 13 items. However, because these 13 items seem to be measuring three distinct constructs under the umbrella term “maximization,” the experimenter chose to conduct data analyses using both the traditional, summed Maximization Scale and also the three experimenter-created Maximization subscales.

Interestingly, the subscales provide unique insight into many facets of this study’s data analyses. Whereas the Maximization Scale (with all 13 items summed) is only significantly correlated with the DMI-Analytical subscale and Schwartz’s own Regret Scale, analyzing the Maximization subscales shows the true nature of the Maximization measure. For review in Table 1, the Maximization subscales add depth and greater understanding to the measured constructs.

#### *Product Assessment Task Measurement*

In the product assessment task, each participant saw two satisficing products and two maximizing products. However, the order in which these were presented was randomized and counterbalanced across participants. Fortunately, there were no statistically significant differences across products or across trials (no effects from completing a maximizing or satisficing product first). Therefore, in the spirit of simplification, the two maximizing trials (max1 and max2) and the two satisficing trials (sat1 and sat2) were collapsed together. The numbers (max1/sat1 versus max2/sat2) denote chronology for the trials in the task, although the orders were counterbalanced across participants.

It would not have been statistically sound, however, to collapse the data any further (to achieve one maximizing trial score and one satisficing trial score by averaging the trials together). A paired samples t-test showed that there were some statistically significant differences between trial one and trial two for the maximizing and satisficing products (max1 versus max2 and sat1 versus sat2). Contrary to the anticipated results, participants actually spent more time and put forth more effort on the second trials. This suggests that the participants were, in fact, engaged by the task instead of just speeding through it.

Although there were statistically significant differences between trials for the maximizing and satisficing products, the paired samples t-test had high power because of the large sample size ( $n=170$ ). However, effect sizes for each variable were small. For example, the effect size for the confidence judgment between the two satisficing trials (sat1 and sat2) was small ( $d = .18$ ). Ultimately, although it would have provided additional data simplification, the trials were not averaged together.

For each of the four trials, the total time in seconds that the participant viewed the product information served as a variable. Another variable was the number of information items the participant viewed (recorded by the total number of times each participant clicked on the five information icons). The number of information items correctly remembered was measured by asking participants to list the information they remembered from the product previously viewed. The number of correct responses was summed for a score of 0 (remembered nothing correctly or refrained from answering) to 5 (remembered every item of product information correctly). Three other variables were measured using a 6-point Likert-type scale repeated in each questionnaire following each product. Confidence was measured using the statement, "I would feel confident about making a purchasing decision based on the information provided." Need for gathering

information was measured with the statement, “It was important for me to view all of the information provided before making a decision.” Lastly, effort was measured using the statement, “I put a lot of effort into evaluating this product.”

*Correlations for Maximization Scale and Product Assessment Task*

Table 2 presents the Pearson’s correlations between the Maximization Scale summed, the three Maximization subscales, and all of the variables from the product assessment task. First, because each participant saw four products, each variable has four separate scores (max1, max2, sat1, and sat2). Variables with at least half of the trials significantly correlated (at least three out of four) are noted.

The Maximization Scale was significantly correlated with the need for gathering information in all four trials. The Maximization Scale was also significantly correlated with the effort put forth in evaluating the products in all four trials. The max-info seeking subscale had somewhat similar correlations, with three of the four trials significant for the need for gathering information variable and all four trials significant for the effort variable. The max-lack of closure subscale was not significantly correlated with any of the variables in the product assessment task. Finally, the max-self efficacy subscale was significantly correlated with the need for gathering information in three out of four trials. This subscale was also correlated in all four trials with the effort put forth in evaluating the products.

*Correlations for DMI and Product Assessment Task*

Table 3 presents the Pearson’s correlations between the DMI-Analytical subscale, DMI-Intuitive subscale, DMI-Regret subscale, and product assessment task variables. As with the Maximization correlations, variables with the majority of trials significantly correlated are noted.

In contrast to the Maximization Scale, the DMI-Analytical subscale was significantly correlated with all but one variable measured in the product assessment task. The DMI-Analytical subscale was significantly correlated on all four trials for the amount of time spent by participants viewing the product information, and it was also significantly correlated on all four trials for the amount of information items viewed by participants. This subscale was also significantly correlated on all four trials with the need to gather information and the effort exerted in evaluating the products. Finally, on three out of the four trials, the DMI-Analytical subscale was significantly correlated with the amount of information participants correctly remembered after evaluating each product.

The level of confidence about making a purchasing decision after viewing the products was the only variable of the product assessment task not significantly correlated with the DMI-Analytical subscale. However, this variable was significantly correlated with the DMI-Intuitive subscale on three out of the four trials. The DMI-Regret subscale had only a few minor significant correlations. All specific data can be viewed in Table 3.

### Discussion

Many robust findings resulted from this experiment. Comparing the Maximization Scale and DMI, which had not been done previously, revealed many interesting relationships (Table 1). The results demonstrated that people with maximizing decision-making styles were likely to also have analytical and regret-based decision making styles. The relationship between these decision-making styles supported the experimenter's original hypotheses, and was certainly consistent with previous research on these measures (Nygren, 2000; Schwartz et al., 2002).

By dividing the Maximization Scale into three specific subscales, the constructs were more effectively examined. Both analytical and intuitive decision-making was positively

correlated with information seeking. Decision makers who had difficulty with closure tended to have a high regret based style, low self efficacy, and were not likely to be intuitive decision makers. Finally, both analytical and intuitive styles had significant relationships with the self efficacy subscale, although the regret style did not. Contrasting the Maximization Scale, Maximization subscales, and DMI illustrated the similarities and differences between decision-making styles, which will ultimately advance the understanding of decision-making processes (Nygren, 2000; Schwartz et al., 2002).

The results from the product assessment task partly supported the hypotheses concerning the Maximization Scale (Table 2). First, there were no significant differences between the products presented with maximizing versus satisficing information. It was hypothesized that maximizers would respond more favorably to products presented with maximizing-style information, and vice versa. The lack of variation across trials in the results could mean that the manipulation used was not effective. However, the data could also suggest that it is not possible to manipulate decision-making styles because they are such strong individual differences. Participants may have simply assessed the information and made decisions through the lenses of their respective decision-making styles, unaffected by the type of information given. After assessing each product, participants wrote free responses to evaluate how much information they used and remembered. These post-product responses suggest that the manipulation was successful. Although the data is purely qualitative, many maximizing participants protested the product information presented in a satisficing style. One participant with high maximization and analytical scores, in response to satisficing-style information describing a digital camera, wrote, "The information given was very vague. They said it would hold hundreds of photos but it did not say exactly how much memory was available. It gave specifics on what the camera was made



from, some type of polycarbonate, but this information was useless to me as most cameras can be put in cases. It was said the camera came in many different types of colors, which was also unimportant to me.” This response suggests that the manipulation was effective, because this participant clearly did not feel that the information given was satisfactory. This participant wrote a similar protest for the other satisficing-style product, but had no qualms about the maximizing-style products.

Participants with maximizing styles did express a greater need for evaluating information and did feel that they put more effort into evaluating the products. However, the 13-item summed Maximization Scale was not significantly correlated to the amount of time participants spent, the amount of information participants viewed, the amount of decision-making confidence participants had based on the information, or the amount of information correctly remembered by participants following the product assessment. These results were contrary to my hypotheses. Although this may initially appear to be a major limitation of the study, the very strong results from the DMI suggest otherwise. Dividing the Maximization Scale into three different subscales did help somewhat to procure further results. The information seeking subscale and self-efficacy subscale (like the original maximizing score) were correlated with a heightened need for evaluating information and heightened effort in product evaluation.

However, the results clearly showed that the Maximization Scale was not an extremely effective decision-making style assessment tool. One possible limitation of the Maximization Scale could be its brevity, as it only contains 13 items. Also, some items may be too specific and not universally applicable, such as items concerning very specific shopping habits like movie renting. The subscales cause additional concern about the Maximization Scale, since they all seem to be measuring separate constructs. By summing all of the items together instead of

treating the subscales separately, the final “maximization score” may not be a good measure of the maximization construct. Additional research is needed to pinpoint exactly what maximization is, how it can most effectively be measured, and whether it applies to all domains of decision-making or is only applicable in certain types of decision situations. Schwartz (2002) said, “Indeed, several of the items on the Maximization Scale were written quite deliberately to be vague as to domain. It is possible that where on the maximizing/satisficing continuum one falls will be a reflection not of how high one’s standards of acceptability are in general, but of how many different domains of choice are dominated by a maximizing orientation.” Future research addressing these questions would certainly help to diminish ambiguities.

Although the Maximization Scale was initially this study’s primary focus, the robust results of the DMI in relation to the product assessment task altered its focus (Table 3). The DMI’s analytical decision-making style had strong correlations with the amount of time participants studied the product information, the amount of product information participants viewed, the amount of product information participants correctly recalled following the product assessment, the need or desire for evaluating product information, and the amount of effort put into product evaluation. These very clear, consistent results strongly suggest that the product assessment task was valid. More importantly, these results suggest that the analytical subscale of the DMI is an excellent measurement tool. Furthermore, the DMI’s intuitive decision-making style was correlated with the confidence to make a purchasing decision based on the information provided. This result also aligns with past research because intuitive decision-makers are confident that intuition will lead to the best decisions (Nygren, 2000).

Several factors could potentially explain the superiority of the DMI in this study. First, the DMI is calculated using three discrete subscales. It separately assesses analytical, intuitive,

and regret-based decision-making styles and consequently, instead of summing the scores, derives a separate score for each construct. Also, the DMI has more than triple the amount of items that the Maximization Scale has (45 versus 13). Finally, the items of the DMI are cleverly written to be very general and applicable to any person's experiences and decision situations. The Maximization Scale, however, may be too specific and limiting. All of these points could serve as possible explanations for the superior construct validity of the DMI.

There were a few limitations of the experiment. First, this study lacked random sampling because only college students enrolled in an introductory psychology class were used. Perhaps the convenience sample affected the results because psychology students may be more aware in general of psychological concepts or may be predisposed to having a certain decision-making style. Although the reported college majors of the participants were quite varied, similar future studies should definitely have more random samples so that they are more representative of the general population.

Despite its limitations, this study managed to expand upon preexisting work in judgment and decision-making research. This study compared Schwartz's Maximization Scale and Nygren's DMI, which are both well respected and widely used measures (Nygren, 2000; Schwartz et al., 2002). Although there have been many interesting and valuable studies about maximization (Iyengar, Wells, and Schwartz, 2006; Schwartz et al., 2002; Schwartz, 2004), an improvement on the scale may enhance future research. Furthermore, this study examined specific decision-making styles as they relate to information consumption during consumer product evaluation. The results of this investigation suggested a strong relationship between an analytical decision-making style, as measured by the DMI, and various decision-making variables. Analytical decision makers looked at more information, spent more time assessing

products, recalled more of the information they studied, put more effort into the decision making process, and expressed a distinct need and desire to consume information in this way before making any decisions.

This study showed that there are individual differences in decision-making styles, and that these propensities towards certain styles significantly affect the way individuals evaluate product information and make decisions about those products. Besides furthering judgment and decision-making literature, these findings could be pertinent to the domains of consumer behavior and advertising. Although further research is needed to understand the precise nuances between analytical and maximizing decision-makers, many studies have suggested that satisficing decision-makers are actually the wisest because they simplify the available choice information (Iyengar, Wells, and Schwartz, 2006; Schwartz et al., 2002; Schwartz, 2004). Hake and Hake (1984) said, “No one disputes that more information could be gathered, but its worth, given the time and cost needed to gather it, may not result in an appreciably better decision.” Many fascinating questions in judgment and decision-making have been explored, and many are yet to be answered.

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Table 1  
Individual Differences Correlations

[illegible]

Table 2  
Correlations for Maximization Scale and Product Assessment Task

	Maximization	Max-Info Seeking	Max-Lack of Closure	Max-Self-Efficacy
Max-Info Seeking	.822**			
Max-Lack of Closure	.657**	.243**		
Max-Self-Efficacy	.557**	.348**	0.032	
Max1-Time	0.034	-0.061	0.056	0.115
Max2-Time	0.072	-0.025	0.067	.156*
Sat1-Time	.153*	0.091	0.122	0.108
Sat2-Time	0.141	0.118	0.076	0.107
Max1-Items	0.039	-0.053	0.05	0.128
Max2-Items	0.101	0.021	0.017	.236**
Sat1-Items	.152*	0.112	0.038	.195*
Sat2-Items	0.123	0.067	0.069	0.145
Max1-Confidence	0.085	0.134	-0.072	0.136
Max2-Confidence	0.085	0.124	-0.046	0.106
Sat1-Confidence	.170*	.152*	0.04	.182*
Sat2-Confidence	0.085	0.143	-0.036	0.053
Max1-Need	.259**	.190*	0.081	.311**
Max2-Need	.156*	0.131	0.073	0.124
Sat1-Need	.178*	.163*	-0.006	.248**
Sat2-Need	.249**	.253**	0.057	.206**
Max1-Effort	.242**	.246**	0.02	.261**
Max2-Effort	.191*	.167*	0.033	.227**
Sat1-Effort	.226**	.189*	-0.001	.344**
Sat2-Effort	.205**	.197*	0.033	.217**
Max1-Correct	.206**	0.11	.173*	.153*
Max2-Correct	0.09	0.031	0.06	0.116
Sat1-Correct	.180*	0.118	0.103	.174*
Sat2-Correct	0.057	0.039	-0.026	0.138

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

n = 170



Table 3  
Correlations for DMI and Product Assessment Task

	DMI-Analytical	DMI-Intuitive	DMI-Regret
DMI-Intuitive	.319**		
DMI-Regret	.240**	-0.14	
Max1-Time	.236**	-0.001	0.011
Max2-Time	.251**	-0.123	0.074
Sat1-Time	.229**	-0.055	.162*
Sat2-Time	.270**	-0.025	0.127
Max1-Items	.243**	0.004	0.056
Max2-Items	.313**	-0.019	0.024
Sat1-Items	.246**	0.097	0.047
Sat2-Items	.250**	-0.033	0.03
Max1-Confidence	0.091	.271**	-0.008
Max2-Confidence	0.056	0.133	-0.095
Sat1-Confidence	0.028	.238**	-.214**
Sat2-Confidence	-0.081	.207**	-0.126
Max1-Need	.420**	0.071	0.109
Max2-Need	.341**	0.081	0.105
Sat1-Need	.376**	.177*	0.093
Sat2-Need	.429**	.189*	.160*
Max1-Effort	.351**	.184*	0.144
Max2-Effort	.295**	0.139	0.055
Sat1-Effort	.370**	.172*	0.03
Sat2-Effort	.289**	0.148	0.104
Max1-Correct	.205**	0.028	0.036
Max2-Correct	.261**	0.064	0.083
Sat1-Correct	.227**	0.048	-0.025
Sat2-Correct	0.059	-0.079	0.077

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

n = 170

## THE PRODUCTS



## ICONS FOR EACH PRODUCT:

Technical specifications  
Materials  
Miscellaneous  
Aesthetics  
Usability

MAXIMIZATION SCALE (Schwartz et al., 2002)

1. Whenever I'm faced with a choice, I try to imagine what all the other possibilities are, even ones that aren't present at the moment.
2. No matter how satisfied I am with my job, it's only right for me to be on the lookout for better opportunities.
3. When I am in the car listening to the radio, I often check other stations to see if something better is playing, even if I am relatively satisfied with what I'm listening to.
4. When I watch TV, I channel surf, often scanning through the available options even while attempting to watch one program.
5. I treat relationships like clothing: I expect to try a lot on before finding the perfect fit.
6. I often find it difficult to shop for a gift for a friend.
7. Renting videos is really difficult. I'm always struggling to pick the best one.
8. When shopping, I have a hard time finding clothing that I really love.
9. I'm a big fan of lists that attempt to rank things (the best movies, the best singers, the best athletes, the best novels, etc.).
10. I find that writing is very difficult, even if it's just writing a letter to a friend, because it's so hard to word things just right. I often do several drafts of even simple things.
11. No matter what I do, I have the highest standards for myself.
12. I never settle for second best.
13. I often fantasize about living in ways that are quite different from my actual life.

REGRET SCALE (Schwartz et al., 2002)

1. Once I make a decision, I don't look back.
2. Whenever I make a choice, I'm curious about what would have happened if I had chosen differently.
3. If I make a choice and it turns out well, I still feel like something of a failure if I find out that another choice would have turned out better.
4. Whenever I make a choice, I try to get information about how the other alternatives turned out.
5. When I think about how I'm doing in life, I often assess opportunities I have passed up.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Completely Disagree</b>	<b>Moderately Disagree</b>	<b>Slightly Disagree</b>	<b>Neutral</b>	<b>Slightly Agree</b>	<b>Moderately Agree</b>	<b>Completely Agree</b>

DECISION MAKING STYLES INVENTORY (Nygren, 2000)

- 1 \_\_\_\_ I feel that if I plan my decisions carefully I will make good decisions.
- 2 \_\_\_\_ In spontaneous decision situations I usually find that I have good intuitions.
- 3 \_\_\_\_ I think that I could keep myself from worrying later if I had made a bad decision.
- 4 \_\_\_\_ In making decisions I first try to make a mental list of all the factors or attributes that will be important to my decision.
- 5 \_\_\_\_ I can get a good “feeling” for most decision situations very quickly.
- 6 \_\_\_\_ I sometimes spend too much time hesitating before making decisions.
- 7 \_\_\_\_ Before I make a decision, I like to figure out the most efficient way of studying it.
- 8 \_\_\_\_ I feel that I have a knack for making good, quick decisions.
- 9 \_\_\_\_ Before I make a decision, I think about whether others will approve or disapprove of it.
- 10 \_\_\_\_ I’m very rational when it comes to evaluating risky options.
- 11 \_\_\_\_ I think that relying on one’s “gut feelings” is a sound decision making principle.
- 12 \_\_\_\_ I tend to be someone who worries a lot over decisions I’ve made.
- 13 \_\_\_\_ In making decisions I first make a careful initial estimate of the situation.
- 14 \_\_\_\_ There are many common sense “rules-of-thumb” that I know of that usually lead to good decisions.
- 15 \_\_\_\_ After making a decision, I find that I often go back and re-evaluate the situation.
- 16 \_\_\_\_ I try to pay attention to past information in making new decisions.
- 17 \_\_\_\_ Sometimes decisions, even important ones, are not difficult to make because they just “feel” right.
- 18 \_\_\_\_ I have trouble putting the results of disappointing decisions I’ve made behind me.
- 19 \_\_\_\_ A good rule of thumb is that the more information I have in making a decision, the better that decision will be.
- 20 \_\_\_\_ Simple decision rules usually work best for me.
- 21 \_\_\_\_ I rarely rethink old decisions I’ve made.
- 22 \_\_\_\_ In making decisions I try to evaluate the importance of each piece of information in the decision process.
- 23 \_\_\_\_ When forced to make a quick decision, I find that information that readily comes to mind is usually the most useful in making a choice.
- 24 \_\_\_\_ Worrying about future decisions that I have to make is something I often do.
- 25 \_\_\_\_ I always try to be fully prepared before I begin working on making a decision.
- 26 \_\_\_\_ My first reaction to a decision situation usually turns out to be the best one.

- 27\_\_\_ Many times when I look back on a choice I've made, I wish that I would have put more effort into evaluating the alternatives.
- 28\_\_\_ In making decisions I try to examine the importance of the good and bad points of each alternative.
- 29\_\_\_ If I can't decide what to do, I go with my "best guess".
- 30\_\_\_ When I find out that I've made a bad decision I feel a lot of regret.
- 31\_\_\_ I like to take a rational, systematic approach to making decisions.
- 32\_\_\_ When making decisions, my first instinct usually turns out to be best.
- 33\_\_\_ If I were gambling at a casino I would prefer to play simpler games like slot machines where you don't have to concentrate on playing complex strategies.
- 34\_\_\_ My best decisions are those for which I've carefully weighed all of the relevant information.
- 35\_\_\_ I let my intuition play a big part in most decisions I make.
- 36\_\_\_ I generally don't make very good decisions under time pressure.
- 37\_\_\_ I generally rely on careful reasoning in making up my mind.
- 38\_\_\_ I often rely on my first impression when making a decision.
- 39\_\_\_ I sometimes get "butterflies" in my stomach when I have to make decisions.
- 40\_\_\_ I like to make decisions in an orderly manner.
- 41\_\_\_ I rely on my intuition in making many of my personal decisions.
- 42\_\_\_ After making a decision I sometimes worry about the regret I'll feel if the outcome turns out to be a bad one.
- 43\_\_\_ Most important decisions in life are complex and need to be evaluated in a systematic way.
- 44\_\_\_ I find that my best decisions usually result from using the "quick and easy" approach rather than the "slow but sure" method.
- 45\_\_\_ Unexpected bad outcomes have a greater impact on me than do unexpected good outcomes.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Strongly</b>	<b>Moderately</b>	<b>Slightly</b>	<b>Slightly</b>	<b>Moderately</b>	<b>Strongly</b>
<b>Disagree</b>	<b>Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Agree</b>	<b>Agree</b>

GENERALIZED SELF-EFFICACY SCALE (Bosscher and Smit, 1998)

1. \_\_\_\_\_ When I make plans, I am certain I can make them work.
2. \_\_\_\_\_ One of my problems is that I cannot get down to work when I should.
3. \_\_\_\_\_ If I can't do a job the first time, I keep trying until I can.
4. \_\_\_\_\_ When I set important goals for myself, I rarely achieve them.
5. \_\_\_\_\_ I give up on things before completing them.
6. \_\_\_\_\_ I avoid facing difficulties.
7. \_\_\_\_\_ If something looks too complicated, I will not even bother to try it.
8. \_\_\_\_\_ When I have something unpleasant to do, I stick to it until I finish it.
9. \_\_\_\_\_ When I decide to do something, I go right to work on it.
10. \_\_\_\_\_ When trying to learn something new, I soon give up if I am not initially successful.
11. \_\_\_\_\_ When unexpected problems occur, I don't handle them well.
12. \_\_\_\_\_ I avoid trying to learn new things when they look too difficult for me.
13. \_\_\_\_\_ Failure just makes me try harder.
14. \_\_\_\_\_ I feel insecure about my ability to do things.
15. \_\_\_\_\_ I am a self-reliant person.
16. \_\_\_\_\_ I give up easily.
17. \_\_\_\_\_ I do not seem capable of dealing with most problems that come up in life.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Strongly</b>	<b>Moderately</b>	<b>Slightly</b>	<b>Slightly</b>	<b>Moderately</b>	<b>Strongly</b>
<b>Disagree</b>	<b>Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Agree</b>	<b>Agree</b>

POST-AD QUESTIONNAIRE

1. Do you feel that you adequately evaluated the product to the best of your ability?
2. Do you feel that you were provided with an adequate amount of information about this product in order to make a decision about it?
3. Do you feel that you spent enough time evaluating the product?
4. If given the opportunity to do so, would you prefer to compare this product with other, similar products before making a final choice?
5. If you did decide to purchase this produce, do you think you would be likely to feel any doubt or regret because you might have not made the best choice compared to other similar alternatives?

**YES**

**NO**

6. I would feel confident about making a purchasing decision based on the information provided.
7. It was important for me to view all of the information provided before making a decision.
8. I put a lot of effort into evaluating this product.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Disagree</b>	<b>Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Agree</b>	<b>Agree</b>
<b>Completely</b>	<b>Moderately</b>	<b>Slightly</b>	<b>Slightly</b>	<b>Moderately</b>	<b>Completely</b>